| Interview Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/665,169 | SNELL, ALAN K. | |
| | Examiner | Art Unit | |
| | Keshia Gibson | 3761 | |

All participants (applicant, applicant's representative, PTO personnel):

(1) *Keshia Gibson*.

(2) *Larry Schwartz*.

(3) *Todd Stancombe*.

(4) *Chad Tillman*.

Date of Interview: *23 May 2005*.

Type: a)☐ Telephonic b)☐ Video Conference
c)☒ Personal [copy given to: 1)☐ applicant 2)☒ applicant's representative]

Exhibit shown or demonstration conducted: d)☒ Yes e)☐ No.
If Yes, brief description: samples of vacuum-packed diapers

Claim(s) discussed: *all*.

Identification of prior art discussed: None. JP 10-095,481, Kellenberger 2004/0167489A1

Agreement with respect to the claims f)☐ was reached. g)☒ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: _____.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Discussed claim objections & rejections, how new art was defined over.

Will swear behind Kellenberger reference

Agreed to review proposed submitted amendments in view of JP 10-095481

KG

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

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# FACSIMILE TRANSMISSION SHEET

Date May 20, 2005

Please deliver the following pages to:

| | | | |
|---|---|---|---|
| Name: | Examiner Keshia Gibson | Fax Number: | (571) 273-7136 |
| Company: | USPTO | Telephone: | (571) 272-7136 |

| | | | |
|---|---|---|---|
| File Reference: | 1032.005 | Total Pages (inc. this one): | 22 |
| Sender: | Chad D. Tillman | | |
| Direct Dial: | (704) 248-6292 | | |

Comments:

RE: 10/665,169

Examiner Gibson:

Sent herewith is a draft Amendment under Rule 111. A petition including 131 declaration is referenced. This petition includes color photographs and is available for download at:

http://ti-law.com/ftp/

The file name is "petition_draft". If possible, please consider this petition and the declaration with the Amendment. I will bring printouts in color to the interview.

Respectfully submitted,
/Chad D. Tillman/
US Reg. No. 38,634

# DRAFT AMENDMENT FOR INTERVIEW PURPOSES ONLY

## AMENDMENT UNDER 37 CFR § 1.111

Applicant requests entry of the following amendments under Rule 111. The sections of this amendment appear on the following pages. No fee is believed due with this Amendment.

*Amendments to the Claims*

This listing of claims replaces all prior versions, and listings, of claims in the application.

1-41. (canceled)

42. (previously presented) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said compressible absorbent diaper is the only diaper disposed within said interior of said sealed substantially air impermeable encasement; and

(g) wherein said sealed substantially air impermeable encasement maintains at least a partial vacuum state in said interior space, and wherein said encasement is sealed after evacuation of air and creation of the at least partial vacuum state within said interior space of said encasement.

43-44. (canceled)

45. (currently amended) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said compressible absorbent diaper is the only diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(g) wherein said encasement is sealed after evacuation of air from said interior space of said encasement; and

(h) wherein a pressure within said interior space of said sealed substantially air impermeable encasement ~~The packaged diaper of claim 44, wherein said pressure~~ is less than 10 mbar.

46. (currently amended) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said compressible absorbent diaper is the only diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(g) wherein said encasement is sealed after evacuation of air from said interior space of said encasement; and

(h) wherein a pressure within said interior space of said sealed substantially air impermeable encasement ~~The packaged diaper of claim 44, wherein said pressure~~ is less than 20 mbar.

47. (currently amended) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said compressible absorbent diaper is the only diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(g) wherein said encasement is sealed after evacuation of air from said interior space of said encasement; and

(h) wherein a pressure within said interior space of said sealed substantially air impermeable encasement ~~The packaged diaper of claim 44, wherein said pressure~~ is between about 5 mbar and about 1 mbar.

48. (currently amended) A packaged diaper, comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement and said encasement is exposed to atmospheric pressure, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said compressible absorbent diaper is the only diaper disposed within said interior of said sealed substantially air impermeable encasement;

(g) wherein a pressure differential across said sealed substantially air impermeable encasement acts upon said encasement to maintain the diaper in its reduced volume state, and

(h) wherein said reduced volume of said diaper that is maintained by the pressure differential is less than ~~an intermediate~~ volume of said diaper when disposed within the interior of said encasement at the time of sealing of said encasement.

49. (previously presented) The packaged diaper of claim 48, wherein the pressure differential across said encasement comprises the difference between the pressure within said interior space of said encasement and general ambient atmospheric pressure at the elevation of the packaged diaper.

50. (previously presented) A packaged diaper, comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said compressible absorbent diaper is the only diaper disposed within the interior of said sealed substantially air impermeable encasement;

(g) wherein a pressure differential across said sealed substantially air impermeable encasement acts upon said encasement to maintain the diaper in its reduced volume state; and

(h) wherein said diaper disposed within said interior space of said sealed substantially air impermeable encasement includes a configuration that is different from a nominal configuration by at least a lengthwise fold in said diaper.

51. (previously presented) A packaged diaper that is vacuum-packed, comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space;

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging; and

(f) wherein said compressible absorbent diaper is the only diaper disposed within the interior of said sealed substantially air impermeable encasement.

52. (previously presented) The packaged diaper of claim 51, wherein said vacuum-packed diaper further comprises a tab that facilitates opening of said sealed substantially air impermeable encasement for release of said compressible absorbent diapers therefrom.

53. (previously presented) The packaged diaper of claim 51, wherein the vacuum-packed diaper has a size no larger than a conventional cigarette package.

54. (previously presented) The packaged diaper of claim 51, wherein the vacuum-packed diaper has three dimensions consisting of a width, length, and height, and the sum of any two of said dimensions is less than 10 cm with no single dimension exceeding 10 cm.

55. (previously presented) The packaged diaper of claim 51, wherein said sealed substantially air impermeable encasement is formed of a flexible material.

56. (previously presented) The packaged diaper of claim 51, wherein said compressible absorbent diaper disposed within the interior of said sealed substantially air impermeable encasement comprises a substantially cylindrical shape.

57. (previously presented) The packaged diaper of claim 56, wherein said compressible absorbent diaper is rolled defining said substantially cylindrical shape.

58. (previously presented) The packaged diaper of claim 51, wherein said compressible absorbent diaper disposed within the interior of said sealed substantially air impermeable encasement comprises a substantially rectangular shape defining a length, a width, and a thickness.

59. (previously presented) The packaged diaper of claim 58, wherein said thickness is less than each of said length and said width, and wherein said compressible absorbent diaper is vacuum-packed within said sealed substantially air impermeable encasement reducing said thickness.

60. (previously presented) The packaged diaper of claim 58, wherein said compressible absorbent diaper is folded at least once along a dimension defining said length.

61. (previously presented) The packaged diaper of claim 58, wherein said compressible absorbent diaper is folded at least twice along a dimension defining said length.

62. (previously presented) The packaged diaper of claim 51, wherein said diaper disposed within said interior space of said encasement has a foldedly reduced length and width each of which is less than about 1/2 of the nominal length and width, respectively, of said diaper.

63. (previously presented) The packaged diaper of claim 51, wherein said diaper disposed within said interior space of said encasement has a foldedly reduced length which is less than about 1/3 of the nominal length of said diaper.

64. (previously presented) The packaged diaper of claim 51, wherein said diaper disposed within said interior space of said encasement has a foldedly reduced length which is less than about 1/4 of the nominal length of said diaper.

65. (previously presented) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said packaged diaper is pocket sized; and

(g) wherein said sealed substantially air impermeable encasement maintains at least a partial vacuum state in said interior space, and wherein said encasement is sealed after evacuation of air and creation of the at least partial vacuum state within said interior space of said encasement.

66-67. (canceled)

68. (currently amended) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said packaged diaper is pocket sized;

(g) wherein said encasement is sealed after evacuation of air from said interior space of said encasement; and

(h) wherein a pressure within said interior space of said sealed substantially air impermeable encasement ~~The packaged diaper of claim 67, wherein said pressure~~ is less than 10 mbar.

69. (currently amended) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said packaged diaper is pocket sized;

(g) wherein said encasement is sealed after evacuation of air from said interior space of said encasement; and

(h) wherein a pressure within said interior space of said sealed substantially air impermeable encasement ~~The packaged diaper of claim 67, wherein said pressure~~ is less than 20 mbar.

70. (currently amended) A packaged diaper comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said packaged diaper is pocket sized;

(g) wherein said encasement is sealed after evacuation of air from said interior space of said encasement; and

(h) wherein a pressure within said interior space of said sealed substantially air impermeable encasement ~~The packaged diaper of claim 67, wherein said pressure~~ is between about 5 mbar and about 1 mbar.

71. (previously presented) A packaged diaper comprising

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement and said encasement is exposed to atmospheric pressure, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein said packaged diaper is pocket sized;

(g) wherein a pressure differential across said sealed substantially air impermeable encasement acts upon said encasement to maintain the diaper in its reduced volume state, and

(h) wherein said reduced volume of said diaper that is maintained by the pressure differential is less than ~~an intermediate~~ volume of said diaper when disposed within the interior of said encasement at the time of sealing of said encasement.

72. (previously presented) The packaged diaper of claim 71, wherein the pressure differential across said encasement comprises the difference between the pressure within said interior space of said encasement and general ambient atmospheric pressure at the elevation of the packaged diaper.

73. (previously presented) A packaged diaper, comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space; and

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging;

(f) wherein a pressure differential across said sealed substantially air impermeable encasement acts upon said encasement to maintain the diaper in its reduced volume state;

(g) wherein said diaper disposed within said interior space of said sealed substantially air impermeable encasement includes a configuration that is different from a nominal configuration by at least a lengthwise fold in said diaper; and

(h) wherein said packaged diaper is pocket sized.

74. (previously presented) A packaged diaper that is vacuum-packed, comprising:

(a) a sealed substantially air impermeable encasement completely enclosing an interior space;

(b) a compressible absorbent diaper disposed within said interior space of said sealed substantially air impermeable encasement;

(c) wherein said compressible absorbent diaper is unsoiled;

(d) wherein, prior to packaging, said compressible absorbent diaper has a nominal volume when unrestrained;

(e) wherein, when disposed within the interior of said sealed substantially air impermeable encasement, said compressible absorbent diaper has a reduced volume that is less than the nominal volume of said compressible absorbent diaper when unrestrained prior to packaging; and

(f) wherein said packaged diaper is pocket sized.

75. (previously presented) The packaged diaper of claim 74, wherein said encasement is substantially impermeable to moisture.

76. (new) The packaged diaper of claim 74, wherein printed graphics on said diaper are viewable through said encasement.

*Amendments to the Specification*

Amendments are hereby made to the specification by way of several replacement paragraphs as indicated below. In accordance with 37 CFR. § 1.121(b)(1)(i), Applicant hereby instructs that each paragraph identified herein is to be replaced with a respective replacement paragraph. The location of each paragraph to be replaced is unambiguously identified below with respect to the previous version of the specification. In accordance with 37 CFR. § 1.121(b)(1)(ii), the full text of each replacement paragraph is provided below with markings to show all the changes relative to the previous version of the paragraph.

**Please insert the following paragraph as the first paragraph of the "Brief Description of the Drawings" section:**

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

**Please insert as the last paragraphs of the "Brief Description of the Drawings" section:**

Additionally, FIGS. 12-15 are color reproductions of color photographs showing vacuum-packed diapers and a method for vacuum-packing diapers as disclosed in provisional patent application serial number 60/451,433, from which priority is claimed and which above has been incorporated herein by reference.

**Please replace the paragraph on page 5, lines 4-10 of the specification as follows:**

~~In accordance with another aspect of the invention, a packaged diaper is provided and includes a densified diaper volumetrically reduced to a second reduced volume and increased density from a first greater volume and lesser nominal density. The reduction of the diaper can entail reduction in one or more dimensions. An encasement can also be provided in which the diaper can be disposed in the second reduced volume. The encasement can confine the diaper so that the diaper is retained in the reduced volume by~~

~~the encasement.~~In accordance with another aspect of the invention, a packaged diaper is provided and includes a diaper being reduced to a second, increased density from a first, nominal density. The increased density of the diaper can be in at least two dimensional directions relative to the nominal density. An encasement can also be provided in which the diaper can be disposed in the second, increased density. The encasement can confine the diaper so that the diaper is retained in the increased density by the encasement.

**Please replace the paragraph on page 8, lines 18-28 of the specification as follows:**

As an example, it has been found that by drawing a vacuum down to about 5 ~~Mbar~~ millibars at room temperature and pressure at a location about 5,000 feet elevation above mean sea level, the volume of the diaper can be reduced to as little as 1/3 or 1/4 that of the nominal volume. Similar results are to be expected at locations of different elevation. However, as is known, at lower elevations a greater vacuum can be drawn to allow for subsequent transportation of the packaged product to higher elevations. For example, vacuum packaging using a vacuum down to 1 or 2 millibars~~Mbar~~ is common at lower elevations. Thus, in the space required to store one conventional diaper, three, four, or more, diapers packaged in accordance with the invention can be stored. The reduced volume packaged diapers are not only advantageous in reducing storage space, the space required for packaging, shipping, etc., is also reduced, leading to considerable cost savings in associated processes.

**Please replace the paragraph on page 11, line 30 through page 12, line 12 of the specification as follows:**

~~In several embodiments of the invention, a reduced diaper is provided. The reduced diaper is densified by volumetric reduction from a first greater volume and lesser nominal density to a second reduced volume and increased density. An encasement can also be included and the diaper can be disposed in the encasement in the second reduced volume. The encasement can thereby confine the reduced diaper so that the diaper is retained in the reduced volume by the encasement. The volumetric reduction can entail~~

~~dimensional reductions in width, thickness, length, and diameter. In this manner, a volumetrically reduced, space-efficient densified diaper is provided that can be easily stored and carried by an individual in a discreet manner. Upon release of the reduced diaper from the encasement, the diaper can be volumetrically expanded and used in the same manner as conventionally packaged diapers.~~Similarly, in one embodiment of the invention, a packaged diaper is provided and can include a diaper being reduced to a second, increased density from a first, nominal density. The increased density of the diaper can be in at least two dimensional directions relative to the nominal density. An encasement can also be included and the diaper can be disposed in the encasement in the second, increased density. The encasement can thereby confine the diaper so that the diaper is retained in the increased density by the encasement. The two dimensional directions can include a width and thickness of the diaper, a width and length, a diameter and length, etc. In this manner, a reduced sized, space-efficient densified diaper is provided that can be easily stored and carried by an individual in a discreet manner. Upon opening of the encasement the diaper expands to its nominal density, typically a greatly expanded size, and can then be used in the same manner as conventionally packaged diapers.

*Amendments to the Drawings*

An amendment in accordance with 37 CFR. § 1.121(d) is hereby made to the drawings. Specifically, new FIGS. 12-15 are added. Each of FIGS. 12-15 includes color reproductions of four color photographs that were submitted with and formed a part of the disclosure of provisional patent application serial number 60/451,433, from which provisional application priority is claimed and which disclosure thereof was incorporated by reference in the present application as originally filed. A petition under Rule 84 is submitted concurrently herewith seeking acceptance of the color photographs as drawings.

REMARKS

In accordance with 37 CFR § 1.121(f), Applicant submits that the amendments made herein introduce no new matter into the application. Claims 42, 45-53, 55-65, and 68-76 are presented after these amendments.

## I. The Objections to the Specification

### A. Antecedent Support for "Intermediate Volume"

The Office Action objects to the specification for failing to provide antecedent support for the phrase "intermediate volume" found in each of claims 48 and 71. In response, Applicant has amended these claims to delete reference to the "intermediate volume." The claims further are amended to clarify that the reduced volume "is less than a volume of said diaper when disposed within the interior of said encasement at the time of sealing of said encasement." Applicant submits that the specification provides support for this at page 9, lines 14-17, which states: "Insofar as the article within the sealed flexible encasement is compressible, the pressure differential acts upon the encasement to compress the article and maintains the article in a reduced volume that is less than the volume of the article at the time the encasement was sealed (before ambient air pressure was restored to the chamber."

### B. New Matter Objections

Two objections are set forth in the Office Action based on new matter. The first objection relates to the paragraph found at page 9, lines 2-17, and added by the Amendment dated March 4, 2005, and the identification of the support for this paragraph is requested.

Applicant respectfully responds this paragraph describes *the process for vacuum-sealing an article* as would be implicitly disclosed and understood to and known by one having ordinary skill in the art from viewing the "SuperVac" vacuum-sealing machine that is shown in the photographs of the incorporated provisional application and, in particular, those photographs labeled Photo #12, Photo #13, Photo #14, Photo #15, and Photo #16. Knowledge of *the process*

*for vacuum-sealing an article*[1] is revealed by the description for vacuum-sealing an article set forth in ¶ 52 of the *Kellenberger et al.* patent publication, which states:

> Schematically shown in FIG. 10 is **one method and apparatus 157 of packaging an article.** In this example, a first reel 158 has sheet material 159 which is rotatably supported on a bed 160 having a vacuum cavity former 162 provided where the article 10 is disposed. Articles 10, such as, for example, the diaper 20 folded as illustrated in FIG. 7, are provided at a loading station 164 and they are disposed on the sheet material 159 over the cavity former 162. **The articles 10 are carried to a packaging station 165 which has a vacuum chamber (not shown). The packaging station 165 also contains film (not shown) and a sealing apparatus (not shown) for sealing the articles 10 in the cavities while they are in the vacuum chamber. The articles 10 in the forming cavities 162 are carried into the packaging station 165 and the chamber is closed. A vacuum is applied to the articles 10 and the cavities 162, and film is then positioned and sealed over each cavity via sealing devices,** such as thermal sealing, ultrasonic bonding, or any other sealing methods known by those skilled in the art. **The vacuum depressurizes the chamber in the packaging station to a pressure which is less than the atmospheric pressure outside of the chamber. After the package is sealed, the vacuum is removed from the chamber, and the chamber and the articles sealed in packages therein are permitted to return to regular atmospheric pressure, which results in compression of the articles in the packages,** providing a soft package (form-fill-seal) which is formed about the article 10. The packaged article 190 may thereafter be removed (not shown).

As shown in bold, which emphasis has been added herein, the disclosure of this paragraph of *Kellenberger et al.* substantially mirrors that of the paragraph at issue in the present application.

Additionally, support for the vacuum packing process as disclosed by the paragraph at issue in the present application is supported from the written disclosure of the provisional application, in which vacuum-packing of a diaper is described. Specifically, the provisional application states, in relevant part:

> Having folded diaper 28 compressed, folded diaper 28 is inserted into an open end 40 of a pliable resilient bag 42 ...Folded diaper 28, fully inserted into the bag 42 (Picture #12), is then placed into a vacuum sealing machine 44's deck 46 (Picture #13, 14, 15)....The lid 48 (Picture #15) is fastened down and the vacuum sealing machine 44 vacuums seals and cuts the bag 42 as a finished product 50 (Picture #1)"

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[1] Kellenberger et al. is cited here as evidencing that the process itself for vacuum-packing *an article* using a vacuum-packing machine is well known, and Applicant does not imply nor in any way suggest that vacuum-packing *a diaper* was known or was obvious in view of the knowledge of the process of vacuum-packing.

The provisional also makes clear that the vacuum-sealing machine miniaturizes the diaper. *See* page 1 ("vacuum sealing means for further miniaturizing of the diaper within the plastic bag"; "The finished product is condensed down"). Applicant submits that this written description of the process for vacuum-packing a diaper directly supports the generic description of the process of vacuum-packing an article as disclosed by the paragraph at issue, and that therefore the addition of this paragraph to the present application does not introduce new matter.

The second objection set forth in the Office Action based on new matter relates to Applicant's correction of the clear error made in describing the vacuum-packed diaper has having a "reduced" density when, obviously, the vacuum-packed diaper would have an increased density and reduced volume when vacuum-packed. Applicant believes that objection has been made to the form of the correction, i.e., Applicant's reference to volume rather than density. Accordingly, Applicant has amended the two paragraphs at issue to remove discussion in terms of volume and to reinsert discussion in terms of density, with the correction that the vacuum-packed diaper includes an increased density rather than a "reduced" density.

## II. Claim Rejections under § 112, ¶ 1

Claims 45-47 and 68-70 stand rejected under § 112, ¶ 1 for lack of enablement. The claims rejected recite pressures at less than 20 millibars, less than 10 millibars, and between 5 and 1 millibars. This is in contrast to the specification, which recites:

> As an example, it has been found that by drawing a vacuum down to about 5 Mbar at room temperature and pressure at a location about 5,000 feet elevation above mean sea level, the volume of the diaper can be reduced to as little as 1/3 or 1/4 that of the nominal volume. Similar results are to be expected at locations of different elevation. However, as is known, at lower elevations a greater vacuum can be drawn to allow for subsequent transportation of the packaged product to higher elevations. For example, vacuum packaging using a vacuum down to 1 or 2 Mbar is common at lower elevations. Thus, in the space required to store one conventional diaper, three, four, or more, diapers packaged in accordance with the invention can be stored. The reduced volume packaged diapers are not only advantageous in reducing storage space, the space required for packaging, shipping, etc., is also reduced, leading to considerable cost savings in associated processes.

The basis of the rejection of these claims is the use of the capital letter "M" in the units of bars shown in this paragraph. According to the Office Action, "Mbar" means "megabars," which is

1,000 atmospheres, and that, therefore, claims reciting pressures of 1,000 times less than atmosphere are not enabled.

Applicant responds that the use of "Mbar" instead of "mbar" in the specification is a clear and obvious error to one of ordinary skill in the art, and that "mbar" would be understood to one of ordinary skill in the art as being the appropriate unit discussed. Indeed, one of ordinary skill in the art would recognize that it would be nonsensical to recite "drawing a vacuum down to about 5,000 atmospheres at room temperature and pressure at a location of about 5,000 feet elevation above mean sea level," and that what is meant is "drawing a vacuum down to about 5,000 atmospheres at room temperature and pressure at a location of about 5,000 feet elevation above mean sea level." In view of this clear error, Applicant has amended this paragraph of the specification to change "Mbar" to "millibars" and Applicant submits that the rejection to claims 45-47 and 68-70 is thereby overcome.

**III. Claim Rejections under § 112, ¶ 2**

Claims 43-44 and 66-67 stand rejected under § 112, ¶ 2 for indefiniteness stemming from the phrase "on the order of millibars." Applicant response that what was intended to be recited was "on the order of magnitude of millibars" and that "of magnitude" was inadvertently omitted when the claims were filed. Applicant further notes that the phrase "on the order of magnitude" is well defined and submits that the range of 5 millibars to 1 or 2 millibars is mathematically deemed to be "on the order of magnitude of millibars."

**IV. Claim Rejections under § 102(c) and §§102(c)/103 Based on Kellenberger et al.**

Claims 41-53 and 55-75 stand rejected as either being anticipated by or rendered obvious in view of Kellenberger et al. In response, Applicant submits the Declaration of Alan Kay Snell, the inventor, under Rule 131 in order to swear behind the Kellenberger et al. reference. The Snell Declaration is attached as Exhibit A to the Rule 84 petition. As evidenced by the Snell Declaration, the invention of each claim had been reduced to practice prior to the filing date of February 14, 2003, of the Kellenberger et al. reference. Without the Kellenberger et al. reference, Applicant submits that the rejections of the claims under § 102(e) and §§102(e)/103 are overcome.

## V. Conclusion

Applicant submits that the rejections to the claims set forth in the Office Action are overcome. Furthermore, Applicant notes and appreciates the extensive searching performed by the Examiner as reflected in the ten pages illustrating the Examiner's search strategy and results. In view of the extensive searching that was performed, and in view of the comprehensive consideration given to the present application as reflected in the Office Action, Applicant submits that no applicable reference anticipates or renders obvious the current claims, and Applicant submits that claims 42, 45-53, 55-65, and 68-76 now stand in condition for allowance. Applicant therefor respectfully requests the passing of the present application to issuance.

Furthermore, it is the position of Applicant that the amendments made herein present no bar to the application of the doctrine of equivalents and that no equivalents are surrendered by any such amendment, as none of the amendments represents "a narrowing amendment" that is "made for purposes of patentability."

It is respectfully requested that the Examiner contact the undersigned if any further action is deemed necessary by the Examiner in order to facilitate prosecution of the present application, and if such further action may be accomplished through an Examiner's amendment.

Respectfully submitted,
Tillman Ivsan, PLLC

Chad D. Tillman
Reg. No. 38,634
Tel: (704) 248-6292
Fax: (877) 248-5100

PO Box 471581
Charlotte, NC 28247

# DRAFT PETITION FOR INTERVIEW PURPOSES ONLY

**PETITION UNDER 37 C.F.R. § 1.84(b)(2)**
**REQUESTING ACCEPTANCE OF COLOR PHOTOGRAPHS**

Applicant files this petition and requests acceptance of color photographs. Applicant seeks to add the color photographs as additional figures through an Amendment under 37 CFR § 1.111 that is submitted concurrently herewith.

Applicant submits that acceptance of these color photographs is necessary in order to accurately reflect in the records of the U.S. Patent & Trademark Office ("USPTO") the true and exact disclosure of the present application as of the day that the present application was filed.

Furthermore, Applicant submits that accurate reflection in the records of the USPTO of the true and exact disclosure of the present application is necessary in order to support the invention that is claimed in dependent claim 76 newly presented in the current Amendment.

**Statement of Facts**

1. On February 26, 2003, Mr. Alan K. Snell mailed via U.S. Certified Mail a provisional patent application to the U.S. Patent & Trademark Office ("USPTO"). *See* DECLARATION OF ALAN K. SNELL ("SNELL DECL."), ¶ 1, attached hereto as **Exhibit A**.
2. This provisional patent application was received by the USPTO on March 4, 2003, and received this date as the official filing date. The USPTO further assigned serial number 60/451,433 to this provisional application (hereinafter the "Provisional Application"). *See* USPTO Provisional Image File Wrapper ("Provisional IFW"), page 1, attached hereto as **Exhibit B**.
3. The Provisional Application as mailed by Mr. Snell contained four pages of color reproductions of sixteen color photographs (hereinafter the "Color Photographs"). SNELL DECL., ¶ 3.
4. A true and correct copy of the four pages containing the Color Photographs as mailed by Mr. Snell is found in **Exhibit 1** to the Declaration of Mr. Snell. *See* SNELL DECL., ¶ 4.
5. The four pages containing the Color Photographs were included in the count of the number of pages shown on the provisional cover sheet, which is identified as

being a part of the application. *See* Provisional Image File Wrapper, pp. 15-18 , attached hereto as **Exhibit B**.

6. The Color Photographs each were numbered as Photo #1 through Photo #16, and reference was made in the written description of the Provisional Application to individual photos of the Color Photographs. See Provisional IFW **(Ex. B)**, pp. 5-6.

7. On September 18, 2003, the law firm of Thorpe North &Western LLP filed a nonprovisional patent application serial number 10/665,169 (the "169 Application"), the inventor of which is Alan K. Snell. *See* U.S. Appl. Publ. No. 2004/0176735 A1 (the "169 Publication"), Front Page, attached hereto as **Exhibit C**.

8. The 169 Application claims priority to the Provisional Application. 169 Publication **(Ex. C)**, ¶ 0001, attached hereto as **Exhibit D**.

9. The 169 Application explicitly incorporates by reference the Provisional Application. 169 Publication **(Ex. D)**, ¶ 0001.

10. An Office Action mailed by the USPTO indicates that the four pages of the Color Photographs as reflected in the records of the USPTO do not clearly show the subject matter disclosed in the four pages of the Color Photographs. *See* Office Action dated May 11, 2005, pp. 3-4, attached hereto as **Exhibit E**.

**Statements of Law**

11. The disclosure of the Provisional Application includes the subject matter disclosed in the Color Photographs, which forms a part of the Provisional Application.

12. The disclosure of the 169 Application includes the disclosure of the Provisional Application as a result of the incorporate by reference of the Provisional Application set forth in the 169 Application as filed.

13. The disclosure of the 169 Application includes the disclosure of the subject matter disclosed in the Color Photographs Provisional Application includes the subject matter disclosed in the four pages of the Color Photographs.

14. The records of the USPTO currently do not accurately reflect the full and complete disclosure of the 169 Application because the four pages of the Color Photographs as reflected in the records of the USPTO do not clearly show the subject matter disclosed in the four pages of the Color Photographs.

15. Only by acceptance of the Color Photographs in the present application can the true and exact disclosure of the 169 Application be accurately reflected in the records of the USPTO.

16. The subject matter disclosed in the Color Photographs is necessary in order for the 169 Application to support newly presented dependent claim 76.

17. Under the present facts, the Color Photographs are necessary as the only practical medium by which to disclose the subject matter sought to be patented in newly presented dependent claim 76 of the present utility patent application.

**Action Requested**

In view of the foregoing statement of facts and statements of law, Applicant respectfully requests that this petition be granted, whereby the Amendment adding the Color Photographs as new Figs. 12-15 may be entered without objection.

In accordance with 37 CFR §1.84, please find included herewith:

(i) The fee set forth in 37 CFR § 1.17(h);

(ii) Three (3) sets of the Color Photographs; and

(iii) An Amendment adding both the Color Photographs as Figs. 12-15 to the present application and the required language found in Rule 84 as the first paragraph of the "Brief Description of the Drawings" section of the application.

Respectfully submitted,
Tillman Ivsan, PLLC

Chad D. Tillman
Reg. No. 38,634
Tel: (704) 248-6292
Fax: (877) 248-5100

# DRAFT DECLARATION OF ALAN KAY SNELL

## DECLARATION OF ALAN KAY SNELL

I, Alan Kay Snell, hereby declare under penalty of perjury:

1. On February 26, 2003, I mailed via U.S. Certified Mail a provisional patent application to the U.S. Patent & Trademark Office ("USPTO"), for which I am identified as the inventor.
2. This provisional patent application was received by the USPTO on March 4, 2003, and received this date as the official filing date. The USPTO further assigned serial number 60/451,433 to this provisional application (hereinafter "Provisional Application").
3. The Provisional Application contained four pages of color reproductions of sixteen color photographs (hereinafter the "Color Photographs").
4. A true and correct copy of the four pages containing the Color Photographs is found in **Exhibit 1** attached hereto.
5. The four pages containing the Color Photographs were included in the count of the number of pages shown on the provisional cover sheet, which is identified as being a part of the application.
6. The Color Photographs each were numbered as Photo #1 through Photo #16, and reference was made in the written description of the Provisional Application to individual photos of the Color Photographs.
7. On September 18, 2003, the law firm of Thorpe North &Western LLP filed nonprovisional patent application serial number 10/665,169 (the "169 Application"), for which I am identified as the inventor.
8. I have been advised by legal counsel and I understand that each of claims 42, 45-53, 55-65, and 68-76 currently presented in the 169 Application, including newly presented dependent claim 76, legally defines an invention (hereinafter collectively "Inventions").
9. On or before February 13, 2003, I conceived of and reduced to practice each of the Inventions.

10. Documentary evidence of the conception and reduction to practice of each of the Inventions is attached hereto as Exhibits 2-6 and 9, which represent photographs that were taken prior to February 13, 2004 ("The Joey Photographs").

11. The Joey Photographs illustrate a "Joey" diaper changing kit that includes a vacuum-packed diaper and accessories for changing a diaper.

12. The photograph of **Exhibit 2** is a perspective view of the bottom of the "Joey" box illustrating a resealable tab for accessing wipes.

13. The photograph of **Exhibit 3** is a perspective view of the bottom of the "Joey" box illustrating the resealable tab being pulled back to expose a wipe.

14. The photograph of **Exhibit 4** is a perspective view of the top of the "Joey" box illustrating the removal of a tray in which the vacuum-packed diaper and accessories are contained.

15. The photograph of **Exhibit 5** illustrates the complete removal of the tray from the "Joey" box of the photograph of Exhibit 4.

16. The photograph of **Exhibit 6** illustrates contents of the "Joey" box including the vacuum-packed diaper in a reduced configuration. The same diaper in a nominal configuration further is illustrated in the photograph of Exhibit 6 to demonstrate the differences between the reduced configuration and nominal configuration of the diaper.

17. **Exhibit 7** represents the enlargement of the portion of the photograph of Exhibit 6 for viewing of the top of the "Joey" box illustrating a copyright notice of 2002 by Eagle Rock Design. Eagle Rock Design was a name under which I was developing the vacuum-packed diaper changing kit.

18. **Exhibit 8** represents the enlargement of the portion of the photograph of Exhibit 6 for better comparison of the nominal configuration of the diaper versus the reduced configuration of the vacuum-packed diaper. Exhibit 8 further illustrates graphics printed on the diaper that are viewable through the encasement of the vacuum-packed diaper.

19. The photograph of **Exhibit 9** again illustrates contents of the "Joey" box and includes two "Joey" boxes comparing the front and back sides thereof.

20. **Exhibit 10** represents the enlargement of the portion of the photograph of Exhibit 9 illustrating the graphics of the diaper being viewable through the encasement of the vacuum-packed diaper.

21. **Exhibit 11** is a document created in 2002 that illustrates the dimensions of the tray of the "Joey" box as illustrated in the photographs of Exhibits 2-6 and 9

22. The vacuum-packed diaper of the Joey Photographs is an unsoiled, packaged diaper that has been vacuum sealed within a substantially air impermeable and moisture impermeable encasement. The diaper further is the only diaper disposed within the interior of the sealed substantially air impermeable encasement. The sealed substantially air impermeable encasement maintains at least a partial vacuum state in the interior space, and the encasement is sealed after evacuation of air and creation of the at least partial vacuum state within the interior space of the encasement. The substantially air impermeable encasement is formed of a flexible material.

23. When individually vacuum-packing diapers in 2002 or before, I sometimes had access to and utilized a vacuum-sealing machine as shown in the Color Photographs that were included in the Provisional Application. In doing so, the diaper was disposed within an air impermeable encasement which was placed under the lid of the vacuum-sealing machine. The lid was then lowered to create a chamber and a vacuum was then drawn within the chamber. The vacuum that was drawn was less than 20 millibars. A vacuum sometimes was drawn to less than 10 millibars. After sealing of the encasement within the vacuum chamber, air was restored to the chamber and the lid was raised. It is my understanding that the sealed diaper is reduced in volume and size when the air is restored to the chamber and the lid is lifted as a result of the increased pressure acting upon the encasement. It further is my understanding that a pressure differential across the sealed substantially air impermeable encasement acts upon the encasement to maintain the diaper in its reduced configuration. Many of the vacuum-packed diapers that I made each had a size no larger than a conventional cigarette pack.

24. When individually vacuum-packing diapers in 2002 or before, I experimented with various diaper configurations within the encasement. I sometimes rolled the diaper into a cylindrical shape and then vacuum-sealed the diaper within the substantially air impermeable encasement. Other times I folded the diaper so that the diaper had a substantially rectangular shape defining a length, a width, and a thickness. Sometimes I folded the diaper at least once along a dimension defining said length. Sometimes I folded the diaper at least twice along a dimension defining said length. Sometimes the

vacuum-packed diapers had a reduced length and width each of which was less than about 1/2 of the nominal length and width, respectively, of the diaper. Sometimes the vacuum-packed diapers had a reduced length and width each of which was less than about 1/3 of the nominal length and width, respectively, of the diaper. Sometimes the vacuum-packed diapers had a reduced length and width each of which was less than about 1/4 of the nominal length and width, respectively, of the diaper.

I hereby declare under penalty of perjury that the foregoing statements are true and accurate.

By: _____

Alan Kay Snell

PHOTO
#2


PHOTO
#4

PHOTO #5
PHOTO #6
PHOTO #7
PHOTO #8

Photo #9
Photo #10
Photo #11
Photo #12

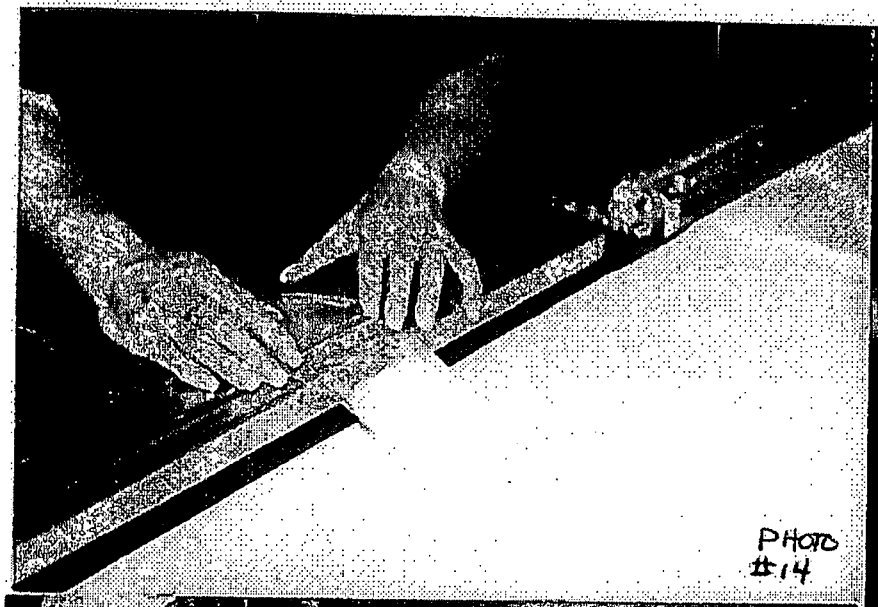


PHOTO #14

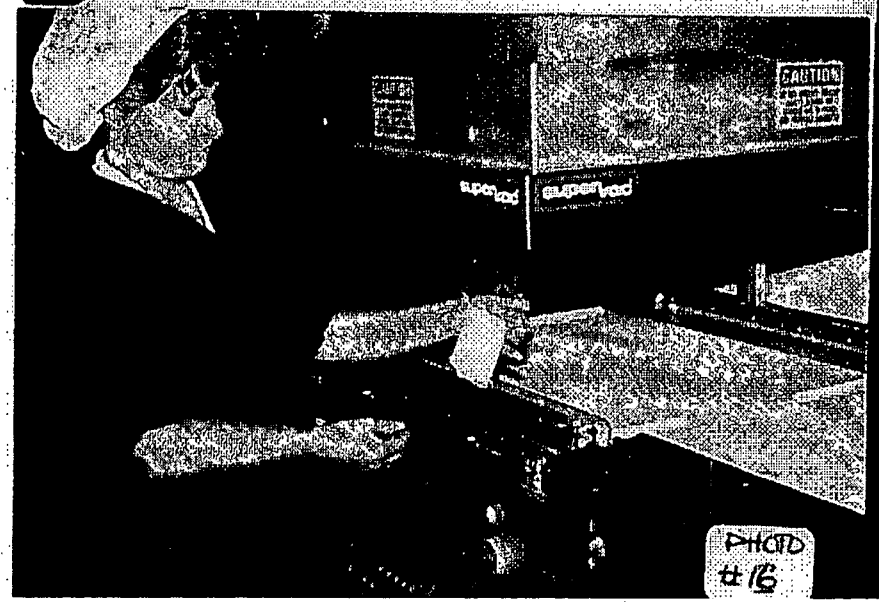
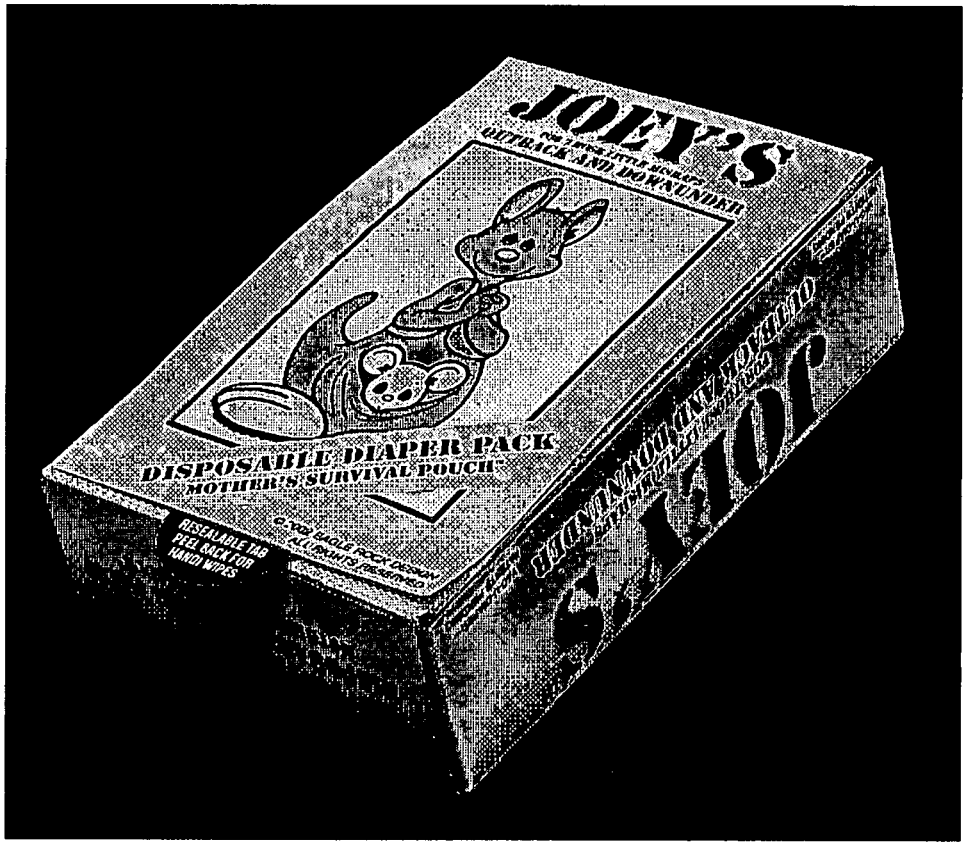
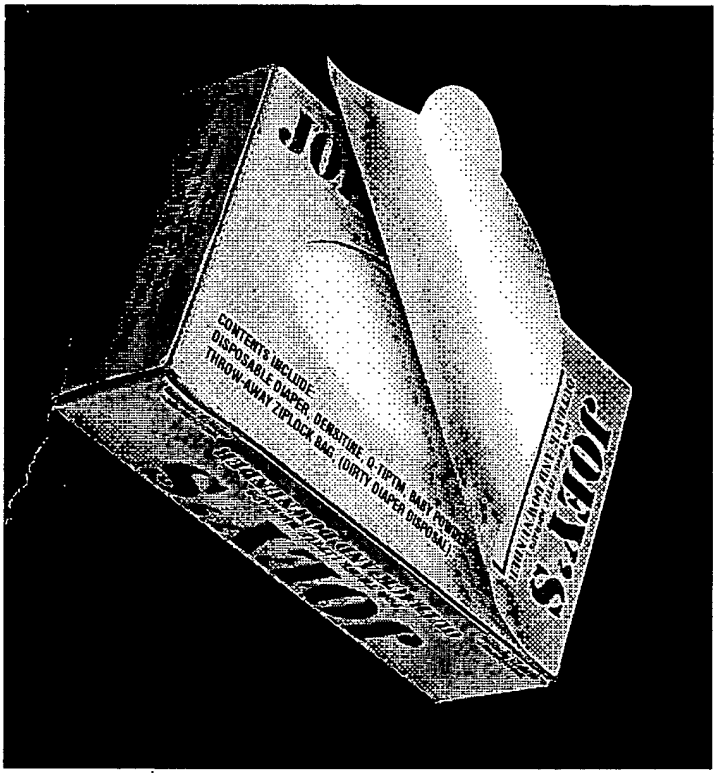


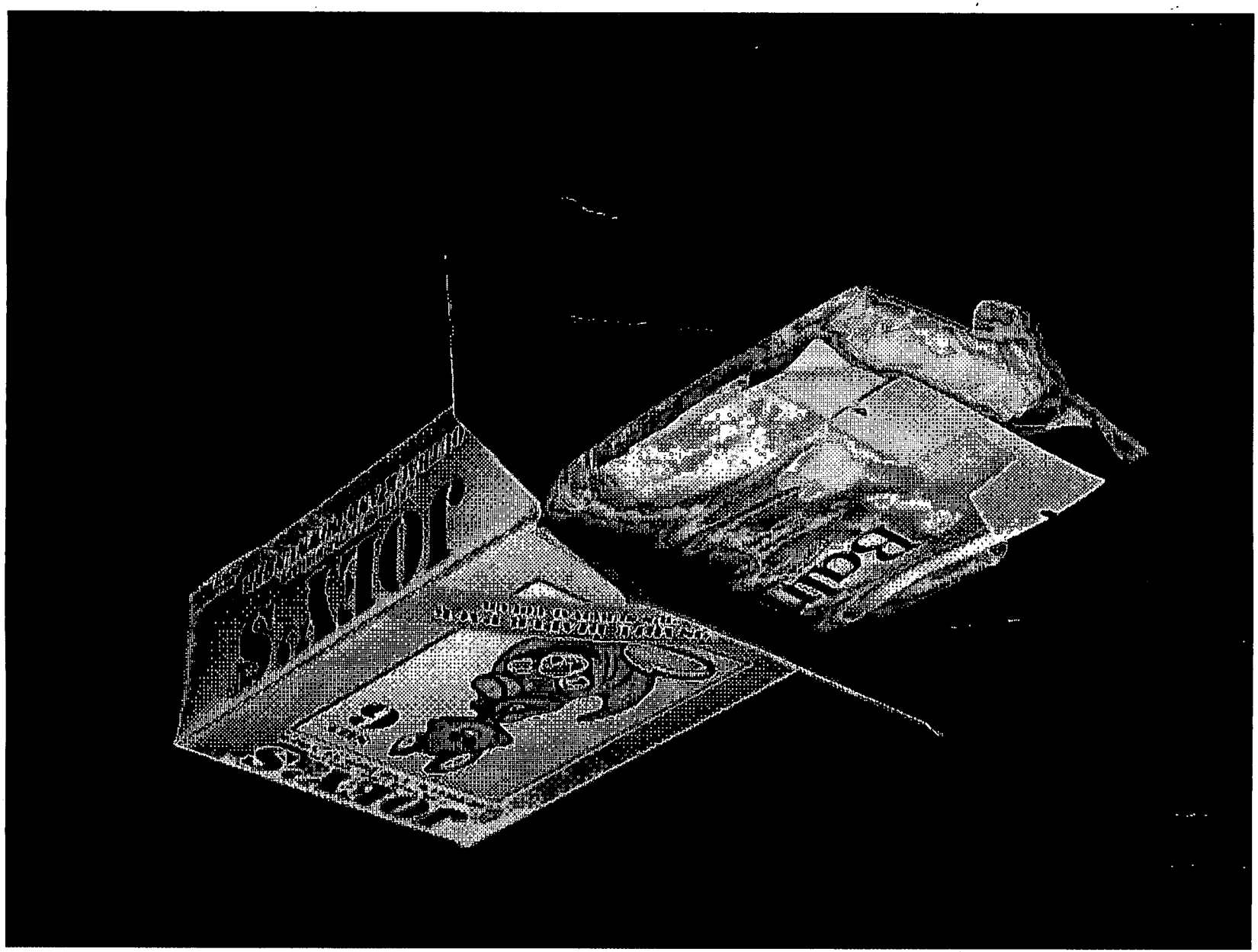
PHOTO #16

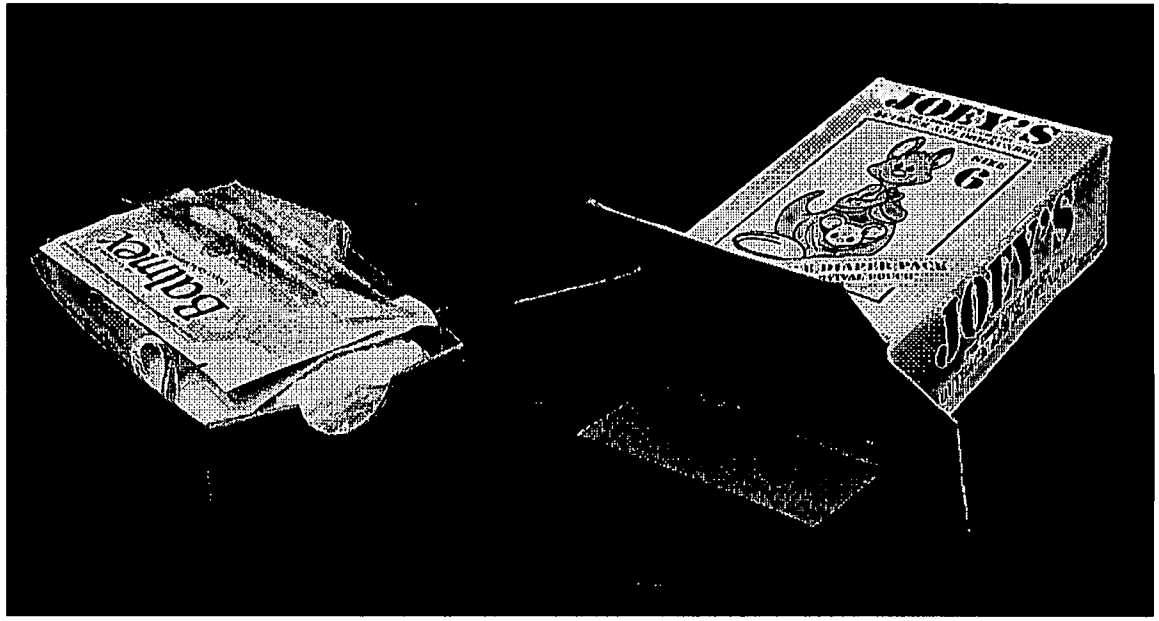
PHOTO #13

PHOTO #15

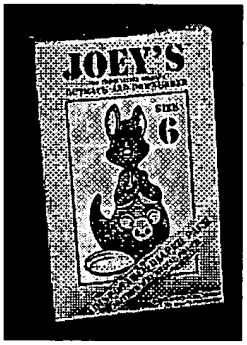

JOEY'S
DISPOSABLE DIAPER PACK
MOTHER'S SURVIVAL POUCH
RESEALABLE TAB
FREE BACK FOR
HANDY WIPES

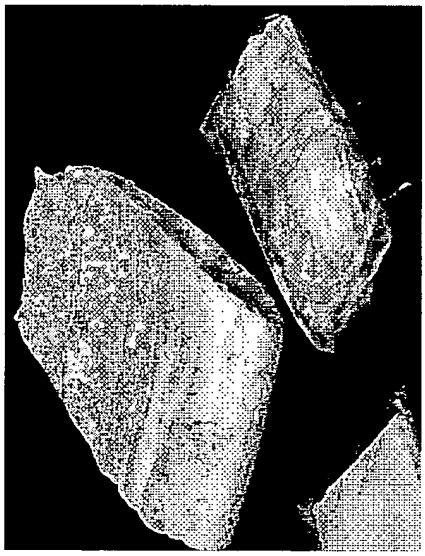

CONTENTS INCLUDE:
DISPOSABLE DIAPER, OINTMENT, BABY POWDER
THROW-AWAY ZIPLOCK BAG (DIRTY DIAPER DISPOSAL)



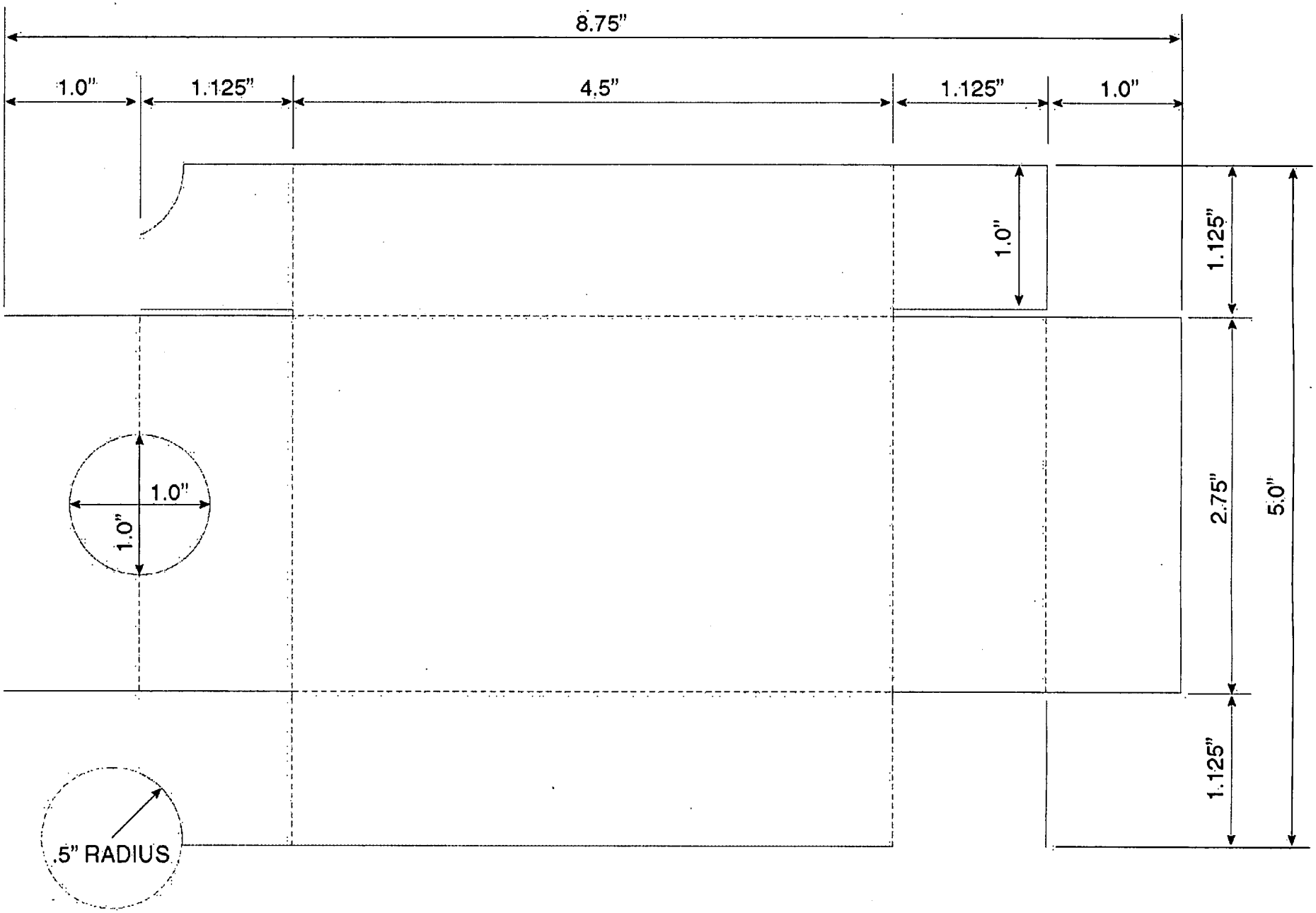

JOEY'S
6
Joey's
Bahrat


JOEY'S
6


JOEY'S
SIZE
6




JOEY'S
JOEY'S
6
Balmex
Balmex




CLIENT WOULD LIKE THE INNER BOX TO BE 110 LB COVER STOCK
EITHER FLOOD PRINTED BOTH SIDES PMS 2725, OR PRINTED ON

Appendix A

PTO/SB/16 (6-95)
Approved for use through 04/11/98. OMB 0651-0037
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

# PROVISIONAL APPLICATION COVER SHEET

Approved

This is a request for filing a PROVISIONAL APPLICATION under 37 CFR 1.53 (b)(2).



| Docket Number | | Type a plus sign (+) inside this box → | + |
|---|---|---|---|

**INVENTOR(s)/APPLICANT(s)**

| LAST NAME | FIRST NAME | MIDDLE INITIAL | RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY) |
|---|---|---|---|
| SNELL | ALAN | K. | 2550 W. BARBERRY LN. IDAHO FALLS, IDAHO U.S.A. |

**TITLE OF THE INVENTION** (280 characters max)

A METHOD FOR MINIATURIZING A DIAPER BY FOLDING AND VACUUM SEALING

**CORRESPONDENCE ADDRESS**

P.O. BOX 100
MENAN, IDAHO 83434

| STATE | IDAHO | ZIP CODE | 83434 | COUNTRY | U.S.A. |
|---|---|---|---|---|---|

**ENCLOSED APPLICATION PARTS** *(check all that apply)*

| | | | | | |
|---|---|---|---|---|---|
| ☑ Specification | *Number of Pages* | 5 | ☑ Small Entity Statement | 1 PAGE | |
| ☑ Drawing(s) | *Number of Sheets* | 5 | ☑ Other (specify) | 16 PHOTOS / 4-PAGES | |

**METHOD OF PAYMENT** *(check one)*

☑ A check or money order is enclosed to cover the Provisional filing fees 412960106

☐ The Commissioner is hereby authorized to charge filing fees and credit Deposit Account Number:

**PROVISIONAL FILING FEE AMOUNT ($)** $80.00

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☑ No.

☐ Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE Alan Snell Date 02/26/03

TYPED or PRINTED NAME ALAN SNELL REGISTRATION NO. *(if appropriate)*

☐ Additional inventors are being named on separately numbered sheets attached hereto

## PROVISIONAL APPLICATION FILING ONLY

# A UNITED STATES PATENT AND TRADEMARK OFFICE

**TRANSMITTAL LETTER**

Mailed 2-26-03

Provisional Patent Application
Commissioner of Patents and Trademarks
Washington, District of Columbia 20231

Sir:

Please file the following enclosed provisional patent application papers:

Application (s) Name(s):

ALAN SNELL

Title A METHOD FOR MINIATURIZING A DIAPER BY FOLDING AND VACUUM SEALING

Cover Page and Specification, No. of Pages Enclosed:_____
Sketch, No, of Pages Enclosed:_____
Small Entity Declaration:
Check for $~~80~~00 for Filing Fee.
Return Receipt Postcard Addressed to Applicant

Respectfully Alan Snell
(Inventor's Signature)

I hereby certify that this paper and fee is being deposited with the United States Postal Service using "Express Mail Office to Addressee" service under 37 CFR 1.10 on the dat indicated above and is addressed to "Commissioner of Patents and Trademarks, Washington, DC 2023[illegible], Box: Patent Application."

Your Signature: Alan Snell

[redacted]

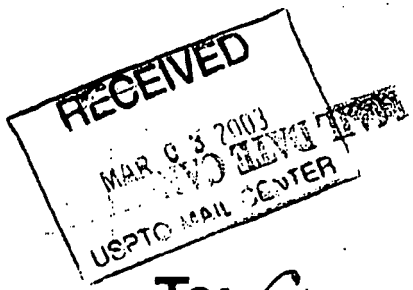
N, IDAHO 83434

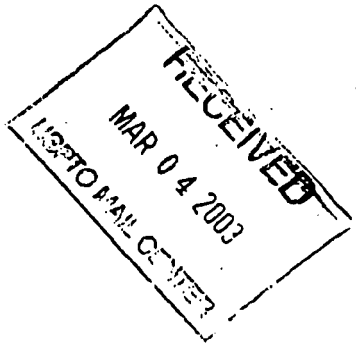
PLACE STICKER AT TOP OF ENVELOPE
TO THE RIGHT OF RETURN ADDRESS
FOLD AT DOTTED LINE

CERTIFIED MAIL

7099 3220 0002 6812 3615

RETURN RECEIPT
REQUESTED




To: COMMISSIONER OF PATENT AND TRADEMA
PROVISIONAL PATENT APPLICATION
WASHINGTON, D.C.
20231

JC996 U.S. PTO
60/451433
03/04/03

## A GENERAL SPECIFICATION

Now the subject of this patent application is more generally described as follows; The miniaturizing of a diaper is accomplished within a seven step method; namely, means for folding a diaper within a jig, a hand clamping apparatus means for transferring the folded compressed diaper from the jig for inserting into a pliable bag, and vacuum sealing means for further miniaturizing of the diaper within the plastic bag. The miniature size of the finished product fits into a convenient size box for illuminating the bulky nature of carrying bulky diapers within a purse or other carrying cases. The finished product is condensed down to a firm and hard exterior surface, and is disguised in appearance to look like a candy bar instead of a baby or an adult diaper.

The seven step process can be readily adapted to mechanical application for automatic manufacturing assembly line runs.

# SPECIFICATION FOR A METHOD FOR MINIATURIZING A DIAPER BY FOLDING AND VACUUM SEALING.

The following is a method for packaging a diaper very compactly by folding and vacuum sealing means.

Step 1

Insert a bulky diaper 12 into a U-shaped elongated opened ended forming jig 14 (Picture # 1), laying the outside of diaper 16 downwardly with the inside of diaper 18 upward.

Step 2

The ragged elastic banded edges 20 of diaper 12 are then folded (tucked) inward (Picture # 2) so as to obtain a smooth clean line exterior.

Step 3

In (Picture # 3) a first end 22 is folded inwardly covering a middle portion of the diaper 24 and the other end 26 is then folded in over the other first end 22 and middle portion 24 forming a rectangular shape 28 as shown in (Picture # 4).

Step 5

A spring tensioned hand clamp 30 is opened with one hand 32 so as to have the upper flat rectangular jaw 34 and lower jaw 36 placed over and under the completely folded diaper 28 , respectively, as illustrated in (Picture 5 & 6). Another hand 38 compressed the diaper 28 as shown in (Picture # 5). Having the folded diaper 28 compressed, folded diaper 28 is inserted into an open end 40 of a pliable resilient bag 42 as shown in ( Picture # 8 & 9), using the hand clamp 30 and jig 14 to facilitate the insertion. As shown in (Picture # 10 & 11) the folded diaper 28 compressed by hand clamp 30 is directly inserted into the open ended bag 42 by hand 32.

Step 6

Folded diaper 28, fully inserted into the bag 42 (Picture # 12), is then placed into a vacuum sealing machine 44's deck 46 (Picture # 13, 14 & 15). The lid 48 (Picture # 15) is fastened down and the vacuum sealing machine 44 vacuums seals and cuts the bag 42 as a finished product 50 (Picture # 1) . The finished product 50 is very firm and dense, looks like a taffy candy bar and as small as one.

Step 7

Insert one or more finished products 50 (Vac-U-Diapers) measuring (1" by 2" by 1 ½") into a box 52 for convenient carrying within a purse 54.

NUMBER OF PART DEFINITION OF PARTS

12 - Bulky Diaper

14 - Elongated open ended U-shaped Forming Jig.

16 - Outside of Diaper

18 - Inside of Diaper

20 - Jagged Elastic edge of Diaper

22 - First Diaper End

24 - Middle Diaper Portion

26 - Other End of Diaper

28 - Folded Diaper

30 - Hand Clamp

32 - One Hand

34 - Upper Flat Jaw of Clamp

36 - Lower Flat Jaw of Clamp

38 - Other Hand

40 - Open End of Bag

42 - Elastic Pliable Bag

44 - Vacuum Sealing Machine

46 - Deck of Vacuum Sealing Machine

48 - Lid of Vacuum Sealing Machine

50 - Finished Vac-U-Diaper Product

52 - Box

54 - Purse

## A BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view of a bulky diaper in the hands of a person.

FIG. 2 is a sketch of a diaper within a jig made for holding and folding said diaper, with a person folding the rough edges inwardly.

FIG. 3 is a view of a diaper with one end being folded inward.

FIG. 4 is a view of a diaper with the other end being folded inward over the first fold.

FIG. 5 shows a hand clamp gripping a folded diaper.

FIG. 6 shows a hand clamp held by a person compressing a folded diaper being inserted into a plastic bag.

FIG. 7 is a perspective view of a folding jig facilitating the hand clamp for inserting a diaper into a plastic bag.

FIG. 8 a folded and compressed diaper within a small plastic bag.

FIG. 9 a folded and compressed diaper within a small plastic bag being positioned within a vacuum sealing machine.

FIG. 10 shows a vacuum sealed diaper within a plastic bag held by a person.

FIG. 1

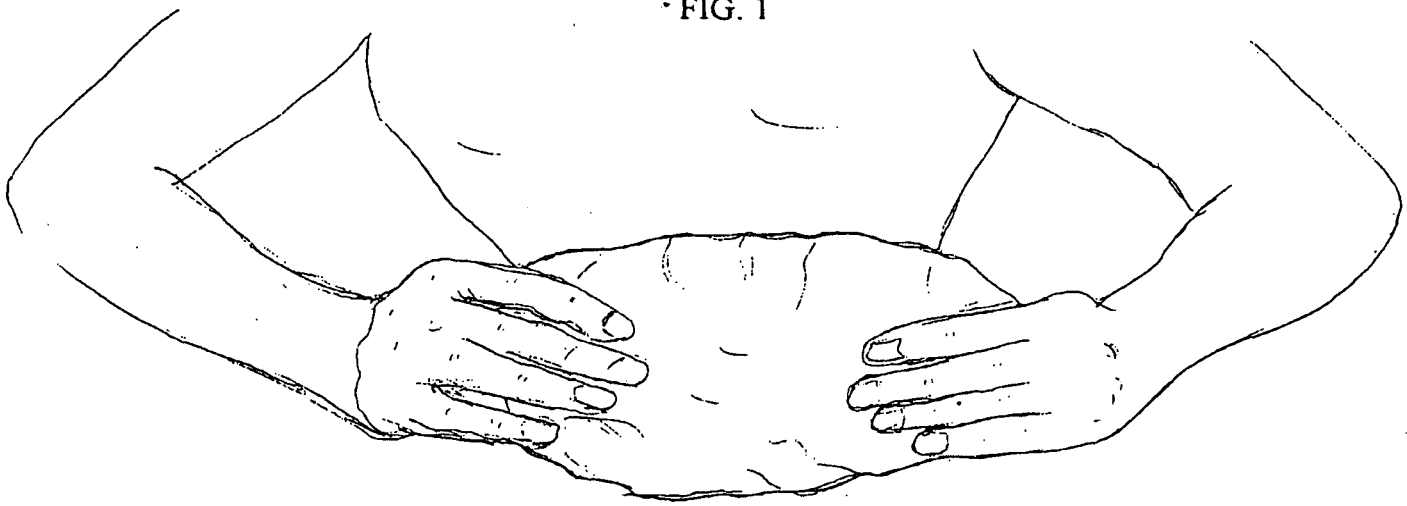


FIG. 2

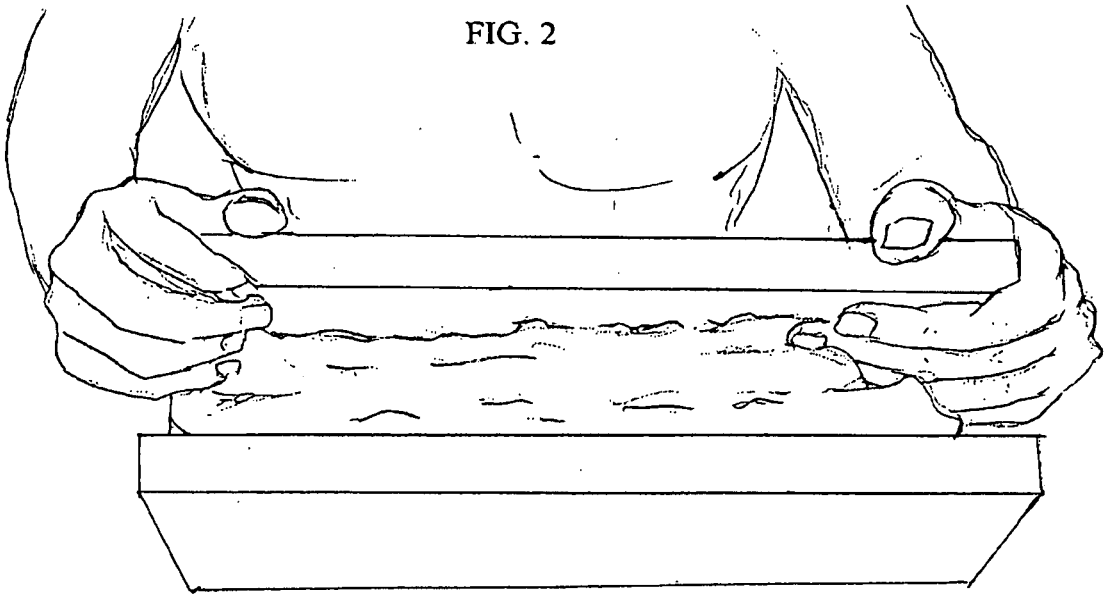


FIG. 4

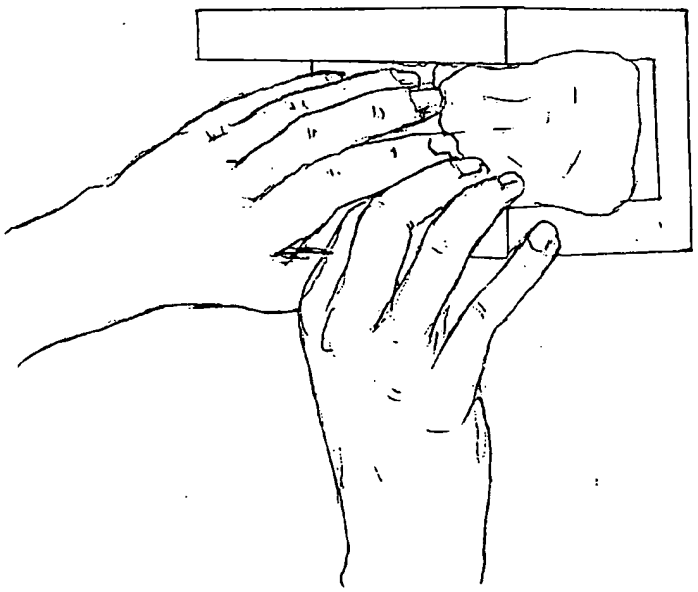


FIG. 3

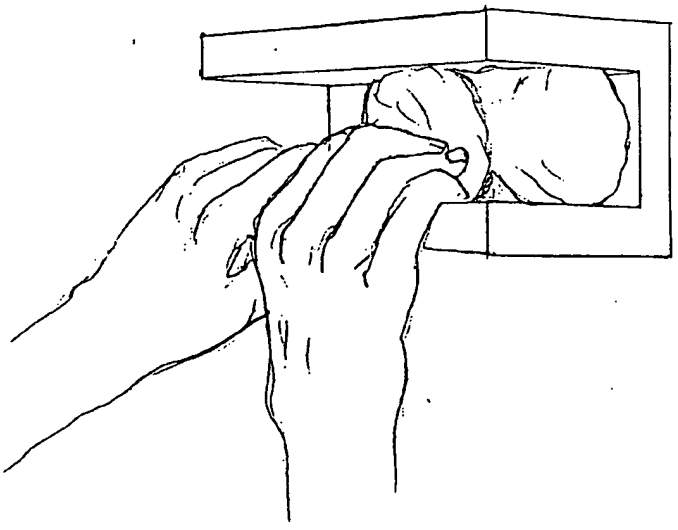


FIG.5

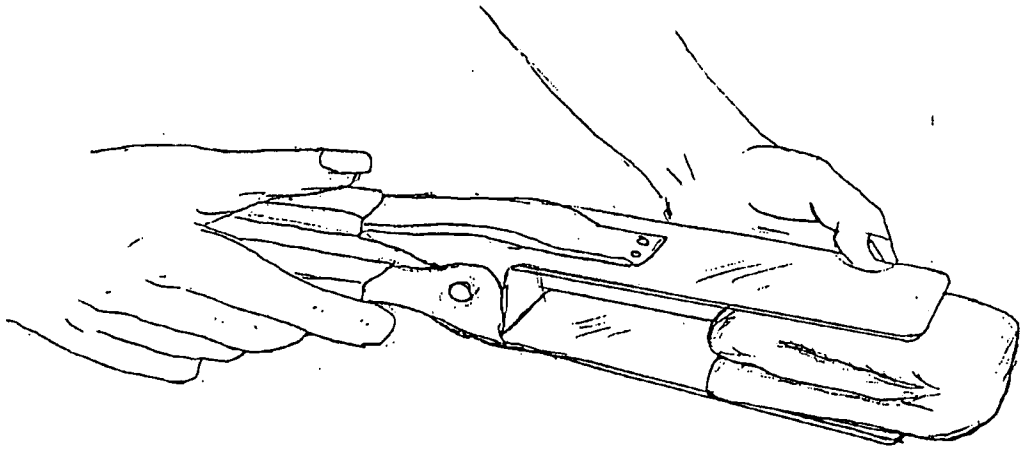
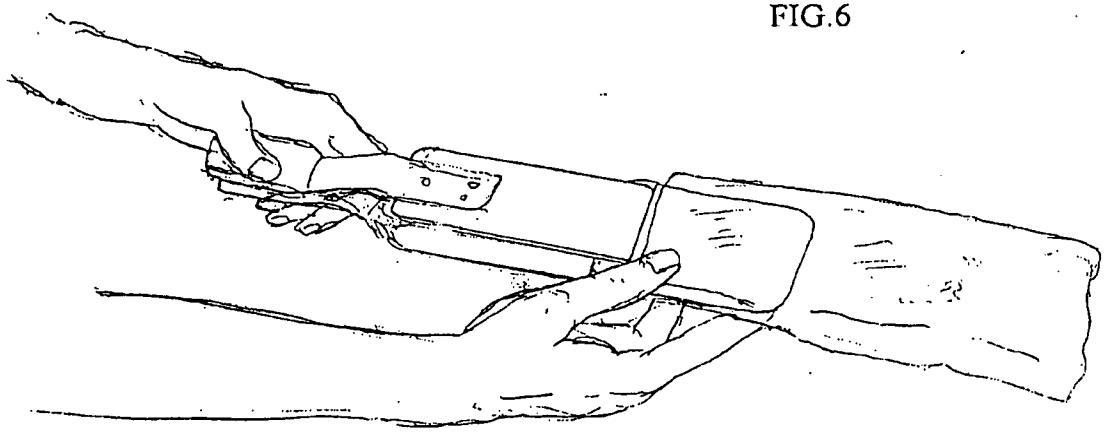


FIG.6



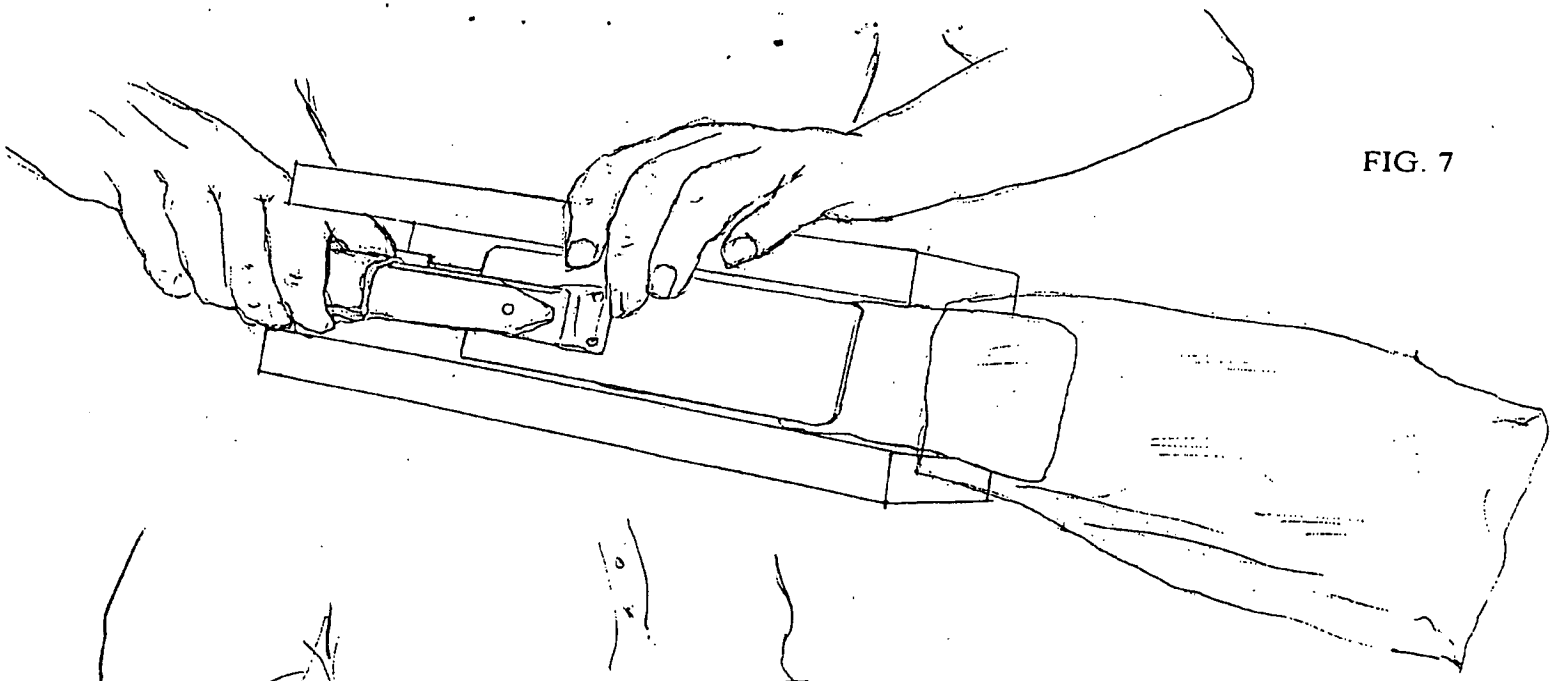


FIG. 7

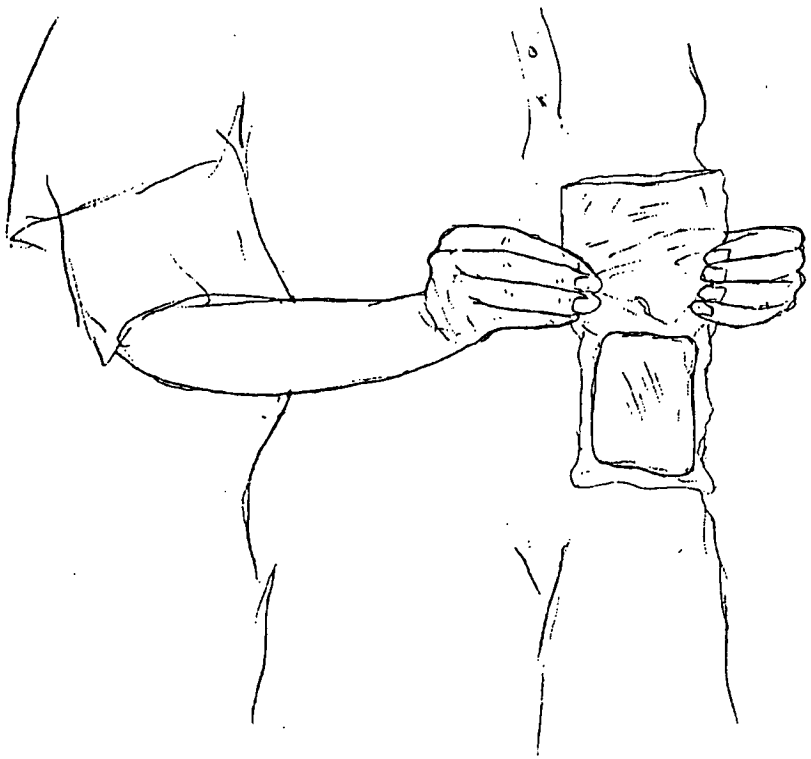


FIG. 8

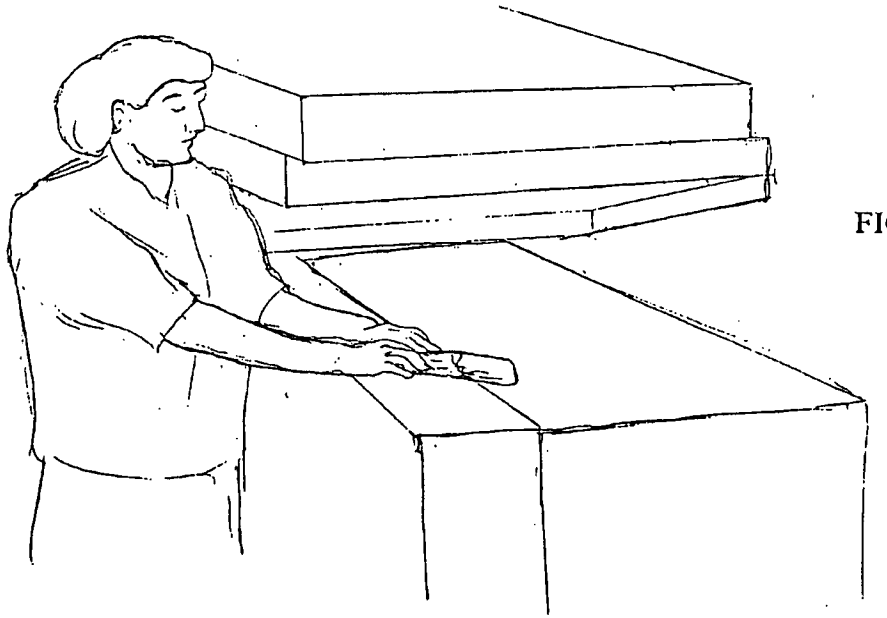


FIG.9

FIG. 10

## In the United States Patent and Trademark Office

First/Sole Applicant: ALAN SNELL

Joint/Second Applicant: _____

Title: * INVENTOR

## Small Entity Declaration—Independent Inventor(s)

As a below-named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35 United States Code, to the Patent and Trademark Office with regard to my above-identified invention described in the specification filed herewith. I have not assigned, granted, conveyed, or licensed—and am under no obligation under any contract or law to assign, grant, convey, or license—any rights in the invention to either (a) any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or (b) any concern which would not qualify as either (i) a small business concern under 37 CFR 1.9(d) or (ii) a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed—or am under an obligation under contract or law to assign, grant, convey, or license—any rights in the invention is listed below:

☑ There is no such person, concern, or organization.

☐ Any applicable person, concern, or organization is listed below:

Full Name: _____

Address: _____

_____

I acknowledge a duty to file, in the above application for patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Alan Snell

Signature of Sole/First Inventor

ALAN SNELL

Print Name of Sole/First Inventor

Date of Signature: _____

_____

Signature of Joint/Second Inventor

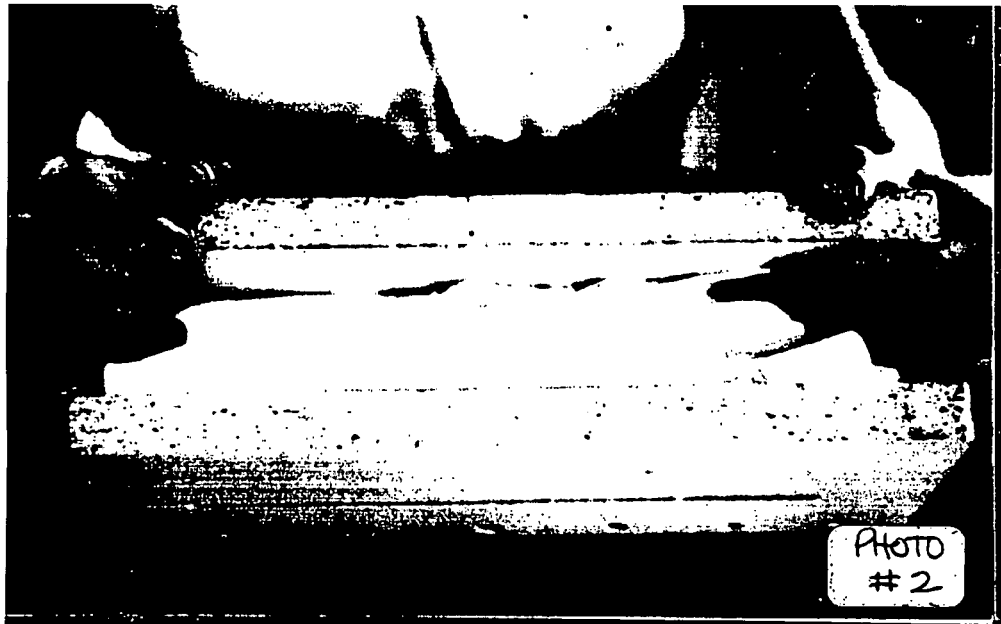
_____

Print Name of Second/Joint Inventor

Date of Signature: _____

*Note: A separate Small Entity Statement is required from any listed entity.

Form 10-3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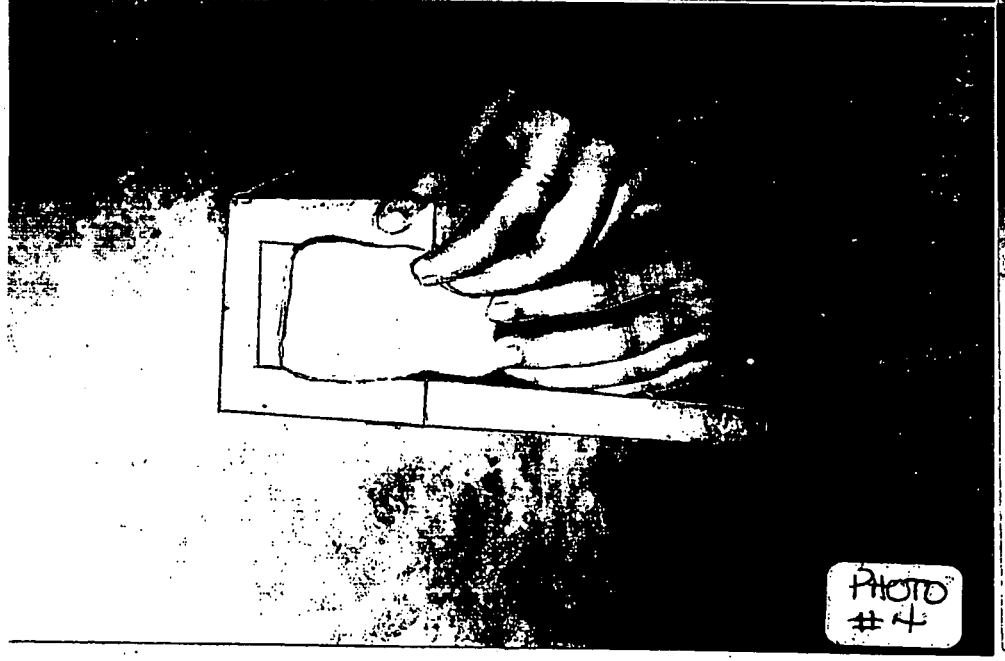
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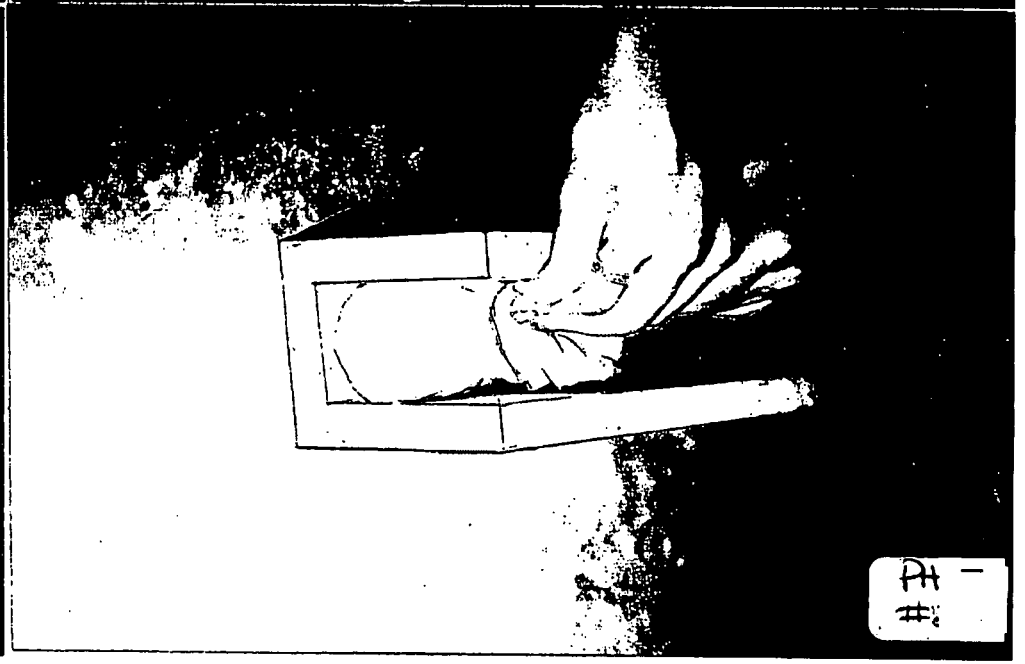
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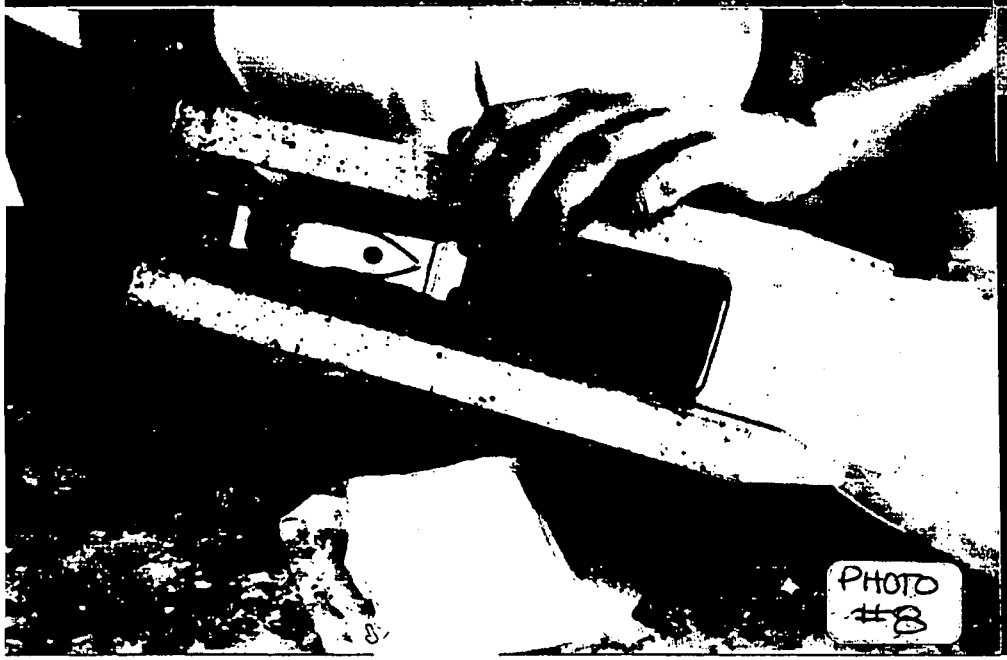
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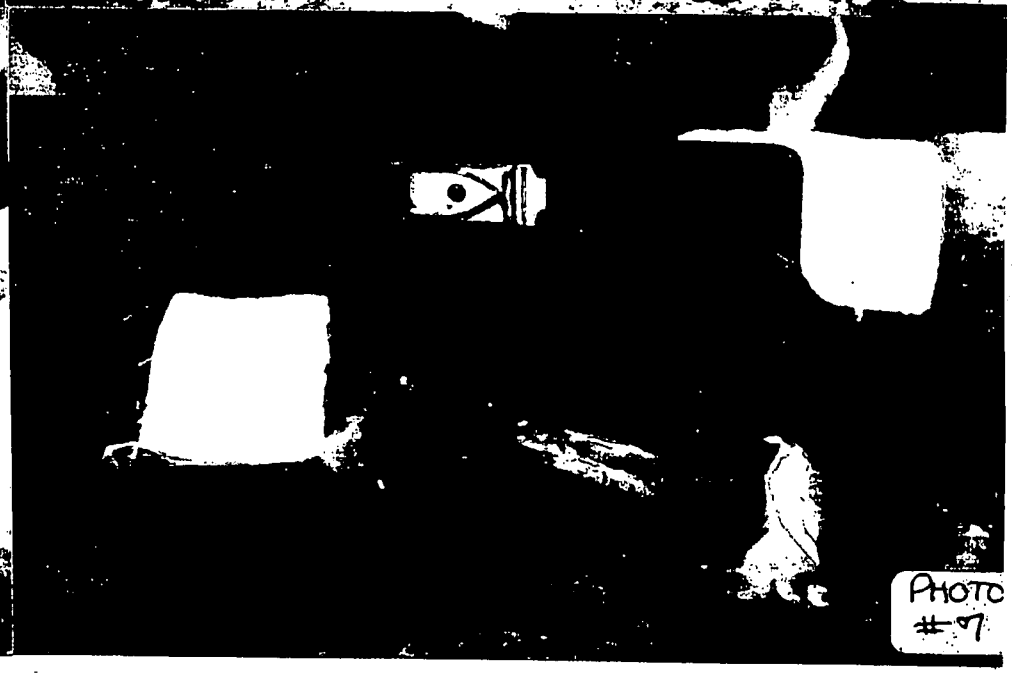
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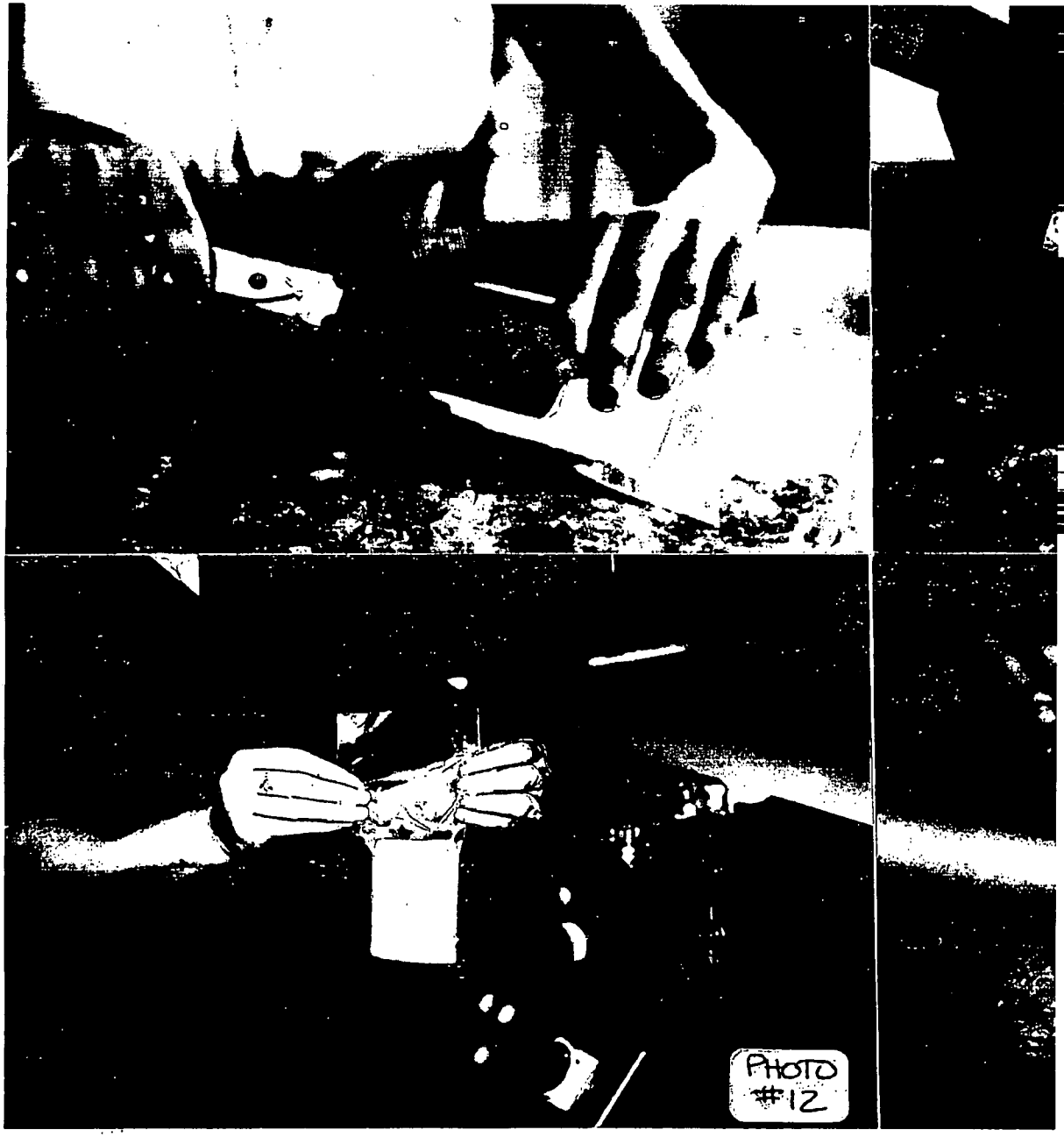
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CAUTION

US 20040176735A1

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**Snell** (43) **Pub. Date: Sep. 9, 2004**

(54) **PACKAGED DIAPER, RELATED ACCESSORIES AND PACKAGING SYSTEM**

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(21) Appl. No.: **10/665,169**

(22) Filed: **Sep. 18, 2003**

**Related U.S. Application Data**

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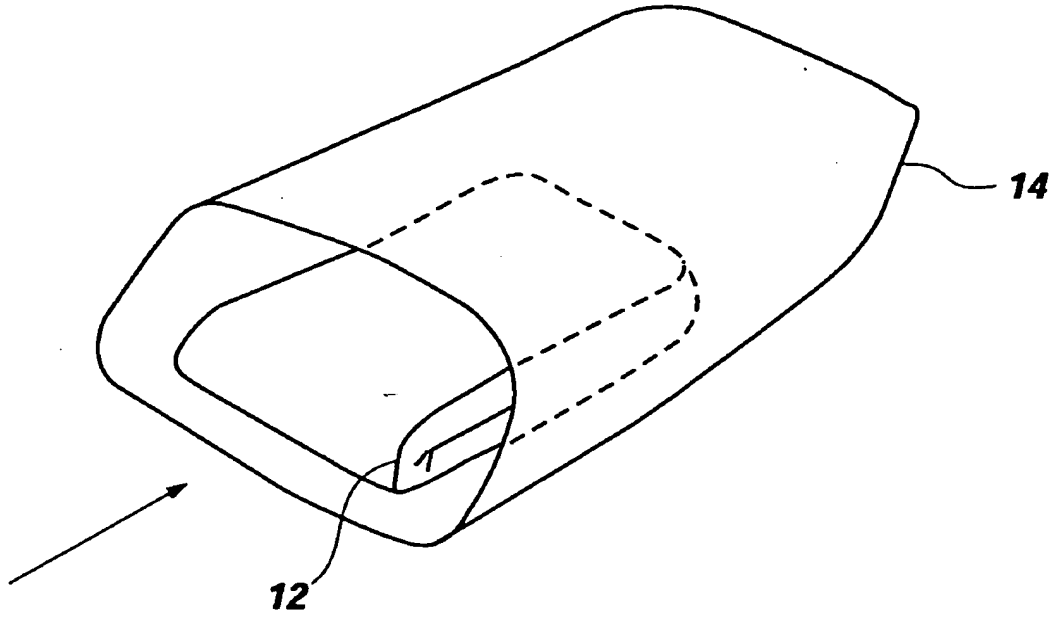
**Publication Classification**

(51) **Int. Cl.**[7] ..... **A61F 13/15**; A61F 13/20; A61L 15/00

(52) **U.S. Cl.** ..... **604/385.01**; 206/438

(57) **ABSTRACT**

A packaged diaper, including a diaper, having a first, a nominal size, and a second, reduced size, the reduced size of the diaper being convenient for carriage and storage of the diaper. The diaper is disposed in an encasement in the second, reduced size. The encasement confines the diaper so that the diaper is retained in its reduced size by the encasement and so that the diaper is returned to its nominal size upon opening of the encasement.



# PACKAGED DIAPER, RELATED ACCESSORIES AND PACKAGING SYSTEM

[0001] This application claims priority of U.S. Provisional Patent Application No. 60/451,433, filed Mar. 4, 2003, which is hereby incorporated herein by reference.

## BACKGROUND

[0002] The present invention relates generally to disposable packaged diapers and related infant and incontinent adult care accessories. More particularly, the present invention relates to a reduced-size packaged diaper, and related infant and incontinent adult care accessories and kits.

[0003] Diapers are generally a necessity for very young children and incontinent adults. Individuals incapable of controlling the release of bodily waste in a manner sufficiently reliable to enable the use of restroom facilities, and those caring for such individuals, typically need to carry extra disposable diapers and changing accessories. This is typically because it is difficult to predict when a diaper worn by an individual may need to be changed. Caretakers of babies and others requiring diapers often carry spare, clean diapers for this reason.

[0004] Many of the following discussions and examples are directed to use of diapers in infant care. However, it will be apparent that many of the same considerations apply to use of diapers for non-infant, incontinent persons.

[0005] Storage and carriage of clean diapers is often inconvenient. For instance, disposable diapers are generally rather bulky items not given to easy storage or carriage in a purse, pocket, or otherwise about the person. In addition, the problem can be acerbated in that diapers can be subject to expansion from the typically somewhat compressed state in which they are normally provided to consumers, especially in circumstances where the diapers are subject to contact with other items within a storage bag. For example, many disposable diapers are provided in a bi-fold configuration meant to minimize the space taken in storing the diaper. However, after being removed from their original packaging, bi-fold diapers often un-fold or otherwise expand to consume an even larger storage space. Thus, disposable diapers can become more bulky and difficult to carry than when in their nominal, packaged condition.

[0006] In addition, it is often the case that it is not sufficient to simply change a soiled diaper and replace it with a clean diaper. For instance, cleaning of the individual who wore the diaper may need to be performed with diaper accessories, such as moist wipes. Also, it may be necessary to apply ointment or powder to the individual wearing the diaper to treat or prevent incidents of diaper rash or other skin conditions. Due to these considerations, caretakers of individuals requiring diapers often carry clean diapers and diaper changing accessories in a dedicated container, is often referred to as a "diaper bag." By doing so, when it becomes necessary to change a diaper, all of the materials needed by the caretaker are available in one location.

[0007] While a conventional diaper bag provides a dedicated container in which diapers and diaper accessories can be stored and carried, the requirement of carriage of a diaper bag often adds to the difficulty of a caretaker's responsibility. For example, parents of young children often must carry a purse or briefcase for the parent's own needs. In addition to this, the parent may need to carry the young child; and, of course, the child's diaper bag. This can leave the parent with no free hands for other tasks.

[0008] While conventional clean diapers and diaper changing accessories can be stored and carried in other carrying containers such as purses, backpacks, briefcases, etc., the bulky nature of conventional disposable diapers results in the diapers occupying a relatively large space within the carrying container. In addition, diaper changing accessories such as moist wipes, ointment, powder, etc., add to the space consumed by conventional clean diapers and can be difficult to locate among other items stored in the backpack, purse, case, or the like.

[0009] Where the diapers being carried by the caretaker are for bottle-feeding infants, the problems discussed above are further exacerbated by the need to carry materials for feeding the baby. In addition to the accoutrement necessary to attending to changing the baby's diaper, things such as bottles, nipples, containers of formula or milk, etc., generally must also be carried.

## SUMMARY OF THE INVENTION

[0010] It has been recognized that it would be advantageous to develop a packaged diaper that requires a relatively small amount of storage space. In addition, it has been recognized that it would be advantageous to develop a diaper and related accessory kit that consumes a relatively small amount of space while providing substantially all of the materials necessary to change an individual's diaper. It has also been recognized that it would be advantageous to develop an infant care kit that consumes a relatively small amount of space while providing substantially all of the materials necessary to feed the infant and change the infant's diaper.

[0011] The invention provides a packaged diaper, including a diaper, having a first, a nominal size, and a second, reduced size, the reduced size of the diaper being convenient for carriage and storage of the diaper. An encasement can also be provided, in which the diaper can be disposed in the second, reduced size. The encasement can confine the diaper so that the diaper is retained in its reduced size by the encasement and so that the diaper is returned to its nominal size upon opening of the encasement.

[0012] In accordance with another aspect of the invention, a packaged diaper is provided, including a diaper, having a first, nominal configuration characterized by a nominal length, width and height, and a second, reduced configuration characterized by a second, reduced length, width and height. The reduced length can be between about 2 inches to about 4 inches, the reduced width can be between about 1.0 inch to about 2.5 inches, and the reduced thickness can be between about 0.5 inches to about 1.5 inches. An encasement can also be provided, in which the diaper can be disposed and retained in the second, reduced configuration.

[0013] In accordance with another aspect of the invention, a packaged diaper is provided, including a diaper, having a first, nominal size and shape, and a reduced, substantially cylindrical size and shape. The reduced, substantially cylindrical shape can have a diameter between about 0.5 inches to about 1.5 inches and a length between about 2 inches to about 4 inches. An encasement can also be provided, in

compliance with the provisions of 37 CFR 1.97 and the information disclosure statement is being considered by the examiner.

***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The "an intermediate volume" of part h of Claims 48 and 71 does not appear to be supported by the specification. As a result, it is renders the language unclear as to what constitutes "an intermediate volume" and also as to during which part of the packaging process it exists. For purposes, it is considered to be a volume that exists during the stage of actually evacuating air from the package to reduce the nominal volume of the diaper to the reduced volume.

5. The amendment filed 3/4/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

a) The paragraph describing a vacuum-packing method and added to the specification on page 9, lines 2-17 is noted by the applicant to be supported by incorporated material of the provisional application to which the present invention claims benefit (US 60/451,433). However, the closest support within US 60/451,433 for this new paragraph of the current application appears to be "Step 6" under "Specification for a Method for Miniaturizing a Diaper by Folding and Vacuum Sealing." This step makes

reference to Pictures 1 and12-15, which are unclear photographs. Furthermore, color photographs and color drawings are not accepted unless a petition filed under 37 CFR 1.84(a)(2) is granted. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

> **The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.**

Color photographs will be accepted if the conditions for accepting color drawings and black and white photographs have been satisfied. See 37 CFR 1.84(b)(2).

The provisional seems to provide some support for the method paragraph added to the specification, but fails to fully support it, due mainly to the lack of clarity of the provisional application. The applicant needs to specifically point out the material in the provisional that supports the newly added paragraph on page 9 of the amended specification.

b) On page 5, lines 4-10 and page 11, line 30—page 12, line 12, the applicant has amended that specification to add, remove, and interchange various references to volume and density. Although influenced by one another, volume and density are distinctly different units of measure, and, therefore, not readily interchangeable. Thus, the current amendments are considered to result in a change in the scope of the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.